DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division — Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LONG POND	Lake Area (ha): 11.49
Town: EATON	Maximum depth (m): 6.7
County: Carroll	Mean depth (m): 1.8
River Basin: Saco	Valume (m³): 206500
Latitude: 43°53′15″N	Relative depth: 1.8
Longitude: 71°04′30″ W	Shore configuration: 1.50
Elevation (ft): 462	Areal water load (m/yr): 37.13
Share length (m): 1800	Flushing rate (yr^{-1}) : 20.60
	Pretention coeff.: 0.40
% watershed ponded: 2.1	Lake type: natural

BIOLOGICAL:	9 January 1989	12 July 1988
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 90%	CHRYSOSPHAERELLA 40%
#2		MELOSIRA 30%
#3		ASTERIONELLA 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)		1730.0
CHLOROPHYLL-A (µg/L)		4.98
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 40%	KERATELLA 51%
#2	KELLICOTTIA 20%	NAUPLIUS LARVA 20%
#3	POLYARTHRA 20%	KELLICOTTIA 16%
ROTIFERS/LITER	25	490
MICROCRUSTACEA/LITER	3	171
ZOOPLANKTON ABUNDANCE (#/L)	30	665
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		3.1
BOTTOM DISSOLVED OXYGEN (mg/L)	9.5	6.8
BACTERIA (fecal col., #/100 ml) #1		< 1
#2		< 1
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.0 Hypolimnian valume (m³): Nane

CHEMICAL:	Lake: LONG POND Town: EATON				
	9 Janua	ary 1989	12	July 1988	
DEPTH (m)	2.0	4.0	1.0	3.0	5.0
pH (units)	6.5	6.5	7.0	6.9	6.8
A.N.C. (Alkalinity)	14.2	13.9	11.1	12.4	9.0
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.14	< 0.10	0.20	0.10	0.30
TOTAL PHOSPHORUS	0.018	0.017	0.008	0.005	0.009
CONDUCTIVITY (u mhos/cm)	63.0	59.6	53.7	54.0	44.6
APPARENT COLOR (cpu)	7	11	11	12	17
MAGNESIUM			0.62		
CALCIUM			4.2		
SODIUM			3.9		
POTASSIUM			0.50		
CHLORIDE	6	7	5		4
SULFATE	5	5	4		4
TN : TP	8		25		33
CALCITE SATURATION INDEX			2.6		

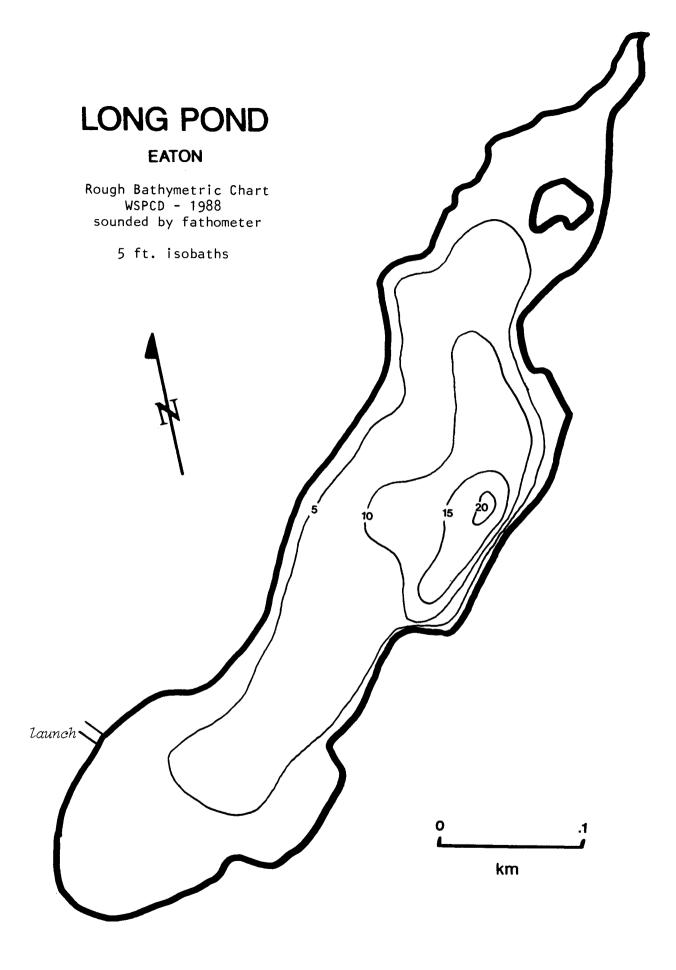
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1988

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	1	1	4	Oligo.

COMMENTS:

- 1. Launch site was off a curve in Rt. 153 (dangerous with traffic) and was steep; parking was available for 3 cars and trailers.
- 2. Steeply sloping land was along both sides of this long, narrow pond.
- 3. The bottom at the deep spot was soft and mucky.
- 4. Whole-water phytoplankton was 40% green algae and 30% diatoms; dominant genera were tiny green flagellates (20%) and Synedra (20%).



FIELD DATA SHEET

LAKE: LONG POND DATE: 07/12/88

TOWN: EATON WEATHER: SUNNY, WARM

DATE: 07/12/88	WEATH	ER: SUNNY, WARM	
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	26.8	7.5	92 %
1.0	26.5	7.5	92 %
2.0	24.5	7.7	90 %
3.0	20.8	10.0	110 %
4.0	17.5	11.4	117 %
5.0	14.2	13.8	132 %
6.0	12.0	6.8	62 %

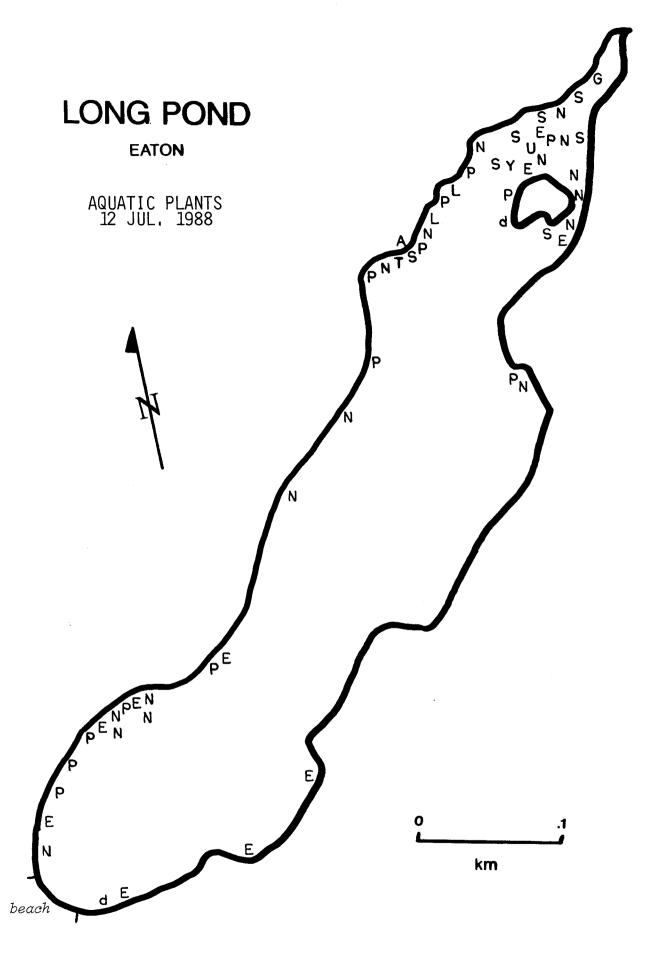
SECCHI DISK (m): 3.1

COMMENTS:

BOTTOM DEPTH (m): 6.5

TIME: 1221

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAKE: LONG POND TOWN: EATON DATE: 07/12/88

	PLANT	NAME	46,000	
Key	GENERIC	COMMON	ABUNDANCE	
Р	Pontederia cordata	Pickerelweed	Scattered	
N	Nymphaea	White water lily	Scattered	
E	Eriocaulon septangulare	Pipewort	Scattered	
Т	Typha	Cattail	Sparse	
S	Sparganium	Bur reed	Scattered	
L	Lobelia dortmanna	Water lobelia	Sparse	
Α	Peltandra virginica	Arrow arum	Sparse	
Υ	Nuphar	Yellow water lily	Scattered	
U	Utricularia	Bladderwort	Scattered	
d	Dulichium arundinaceum	Three-way sedge	Sparse	
G	Gramineae	Grass family	Sparse	

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. The northern end of the pond was very shallow and weedy (i.e. a marsh).